

The Examiner has rejected claims 2, 4-17 and 19-31 under 35 U.S.C. 103(a) as being unpatentable over *Grisamore*. This rejection by the Examiner is respectfully traversed.

Applicant begins with claim 2. Claim 2 recites:

"A method comprising:

analyzing input terms on a bit-wise basis to segment each level of bit significance of input terms:

selecting resources to generate a summing module based, at least in part, on the analysis;

and

designing a hyperpipelined series of Boolean function generators to implement a Wallace-architecture of full-adders, half-adders, and associated registers in the selected resources, the series of Boolean function generators to combine the input terms to produce intermediate summation results."

Claim 17 is similar.

It is well established that to establish a *prima facie* case of obviousness, three basic criteria must be met. First, a suggestion or motivation must be shown, either in the references themselves or in knowledge generally available to one of ordinary skill in the art, to modify a prior art reference or combine two or more prior art references. Second, a reasonable expectation of success in making this combination or modification must be shown. Third, it must be shown that the combination or modification, if proper, contains all of the elements of the application under examination. If any of these elements are not met, a successful *prima facie* case of obviousness has not been established.

It is respectfully asserted that *Grisamore* does not contain all of the elements of the rejected claims. The Examiner already concedes that *Grisamore* does not teach registers based on the cited figures and is, therefore, lacking at least one element of the rejected claim.

Furthermore, the Examiner has provided no suggestion or motivation to modify *Grisamore*. The Examiner states that it would have been obvious to a person of ordinary skill in the art to provide the Wallace-architecture of *Grisamore* with registers. However, one of ordinary skill in the art having *Grisamore* before him or her would be unable to produce the subject matter of the

claims, and, therefore, *Grisamore*, by itself, would not render either of claims 2 and 17 obvious. It is, therefore, respectfully asserted that claims 2 and 17 are in condition for allowance.

More specifically, *Grisamore* does not disclose or suggest, for example, bit-wise analysis of input terms. *Grisamore* discloses a Wallace-architecture based on "one of [a] plurality of reduction patterns and the size of the current partial products," as stated at col. 2, lines 35 to 41. *Grisamore* describes this process in detail at col. 7, line 30 to col. 8, line 37. There appears to be no contemplation throughout the *Grisamore* patent that analysis is performed on a bit-wise basis. *Grisamore* clearly omits any discussion of analyzing the input terms on a bit-wise, as recited in the rejected claims.

It is respectfully asserted, therefore, that at least one prong of the three-prong test for obviousness has not been satisfied, and a *prima facie* case of obviousness under section 103 of the patent statute has not been made. It is, therefore, respectfully asserted that claims 2 and 17 are in condition for allowance.

Claims 4-16 depend from, and include all of the limitations, of claim 2. Therefore, these claims distinguish from the cited patent at least on the same basis. It is respectfully requested that the Examiner withdraw his rejection of these claims.

Claims 19-31 depend from, and include all of the limitations, of claim 17. Therefore, these claims distinguish from the cited patent at least one the same basis. It is respectfully requested that the Examiner withdraw his rejection of these claims.

The Examiner has also rejected claims 2, 4-17 and 19-31 under 35 U.S.C. 103(a) as being unpatentable over *Costa*. This rejection by the Examiner is also respectfully traversed.

Again, one of ordinary skill in the art having *Costa* before him or her would be unable to produce the subject matter of the claims, and, therefore, *Costa*, by itself, would not render claims 2 and 17 obvious. It is, therefore, respectfully asserted that claims 2 and 17 are in condition for allowance.

It is respectfully asserted that, similarly to the *Grisamore* case, *Costa* does not disclose bit-wise analysis of input terms. *Costa* is noticeably silent on segmenting input terms within each level of bit significance and fails to disclose, suggest, or even contemplate a level of bit significance.

Again, it is respectfully asserted that at least one prong of the three-prong test for obviousness has not been satisfied. Therefore, a *prima facie* case of obviousness under section 103 of the patent statute has not been made. It is, therefore, respectfully asserted that claims 2 and 17 are in condition for allowance.

Claims 4-16 depend from, and include all of the limitations of claim 2. Therefore, these claims distinguish from the cited patent at least one the same basis. It is respectfully requested that the Examiner withdraw his rejection of these claims.

Claims 19-31 depend from, and include all of the limitations of claim 17. Therefore, these claims distinguish from the cited patent at least on the same basis. It is respectfully requested that the Examiner withdraw his rejection of these claims.


**CONCLUSION**

In view of the foregoing, it is respectfully asserted that all of the claims pending in this patent application are in condition for allowance. If the Examiner has any questions, he is invited to contact the undersigned at (503) 640-6475. Reconsideration of this patent application and early allowance of all the claims is respectfully requested.

Please charge any shortages and credit any overcharges of any fees required for this submission to Deposit Account number 50-3130.

Respectfully submitted,

Dated: 2/16/05

  
\_\_\_\_\_  
Michael J. Willardsen  
Patent Attorney  
Reg. No. 50,856